

New record of the genus *Philodamia* Thorell, 1894 from China, with descriptions of two new species (Araneae: Thomisidae)

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Abstract — Two new species of the spider genus *Philodamia* Thorell, 1894 are described on the basis of the specimens collected from southern China, under the names, *Philodamia pingxiang* new species and *Philodamia tongmian* new species. The male of the genus was newly discovered, and the details of its palpal organ are described and illustrated for the first time.

Key words — Araneae, Thomisidae, *Philodamia*, new species, China

Introduction

Philodamia Thorell, 1894, is a small genus in the family Thomisidae, and consists of four species (Ono, 1988; Lehtinen, 2004): *P. armillata* Thorell, 1895 (Myanmar, Bhutan); *P. variata* Thorell, 1894 (Singapore); *P. hilaris* Thorell, 1894 (Singapore) and *P. semicineta* (Workman, 1896)(Singapore). Of these, the last species was recently transferred from *Misumena* by Lehtinen (2004). Moreover, only female spiders are known of all recorded species in this genus. Workman (1896) redescribed the two species, *P. variata* Thorell, 1894 and *P. hilaris* Thorell, 1894, and appended their habitus figures and front views, but their description was short. The general complexion of the genus was described by Murphy & Murphy (2000) mainly on the basis of the shape and color of the body from figures made by Workman in the past century. Ono (2001) recorded the female of *Philodamia armillata* Thorell, 1895 from Bhutan based on the comparison with its female type specimen, but the description and illustration were not provided. Thus, the genital structure for a definite identification has not been illustrated.

During an examination of crab spider specimens collected from Guangxi of South China in 2006, two new species of the genus *Philidamia* were found. This genus was hitherto unknown in China (Song & Zhu, 1997). These new species are described and illustrated herein under the names, *Philodamia pingxiang* and *Philodamia tongmian*. The material includes males of both the new species. This is a first record of males of the genus and their palps are described and illustrated for the first time.

The type specimens are deposited in the collection of the College of Life Sciences, Hebei University (HU), Baoding, China.

Abbreviations

For the description, following abbreviations are used: AME, anterior median eye; ALE, anterior lateral eye; PME, posterior median eye; PLE, posterior lateral eye; MOA, median ocular area; VTA, ventral tibial apophysis; RTA, retrolateral tibial apophysis. All measurements given are in mm.

Taxonomy

Genus *Philodamia* Thorell, 1894

Philodamia Thorell, 1894: 26, type species by original designation: *Philodamia hilaris* Thorell, 1894; Simon, 1895: 996; Murphy & Murphy, 2000: 445.

Diagnosis. Small-sized thomisids with body length 2.38–4.14; male slightly smaller than female. Carapace wider than long in female, as wide as long in male, with long setae. Tubercles of ALE and PLE developed, and close to each other. ALE > PLE > AME > PME. MOA much wider than long, much wider in front than behind. Chelicerae without tooth, its prolateral part with 4–5 setae. Labium longer than wide, sternum longer than wide. Leg formula: II-I-III-IV. Femur I with a half-baked dark annulation near distal end and remnant segments of legs with dark spots, claw tufts poorly developed. Legs hairy, with spines. Male palp with VTA and RTA, RTA strongly developed, cymbium with a large apophysis proximally, embolus short and filiform, with a narrow and long tutaculum. Abdomen oval, longer than wide, dorsally with distinct markings. Epigynum slightly sclerotized, with fold anteriorly, intromittent canal short, spermathecae winding.

Distribution. China, Bhutan, Myanmar (Burma) and Singapore.

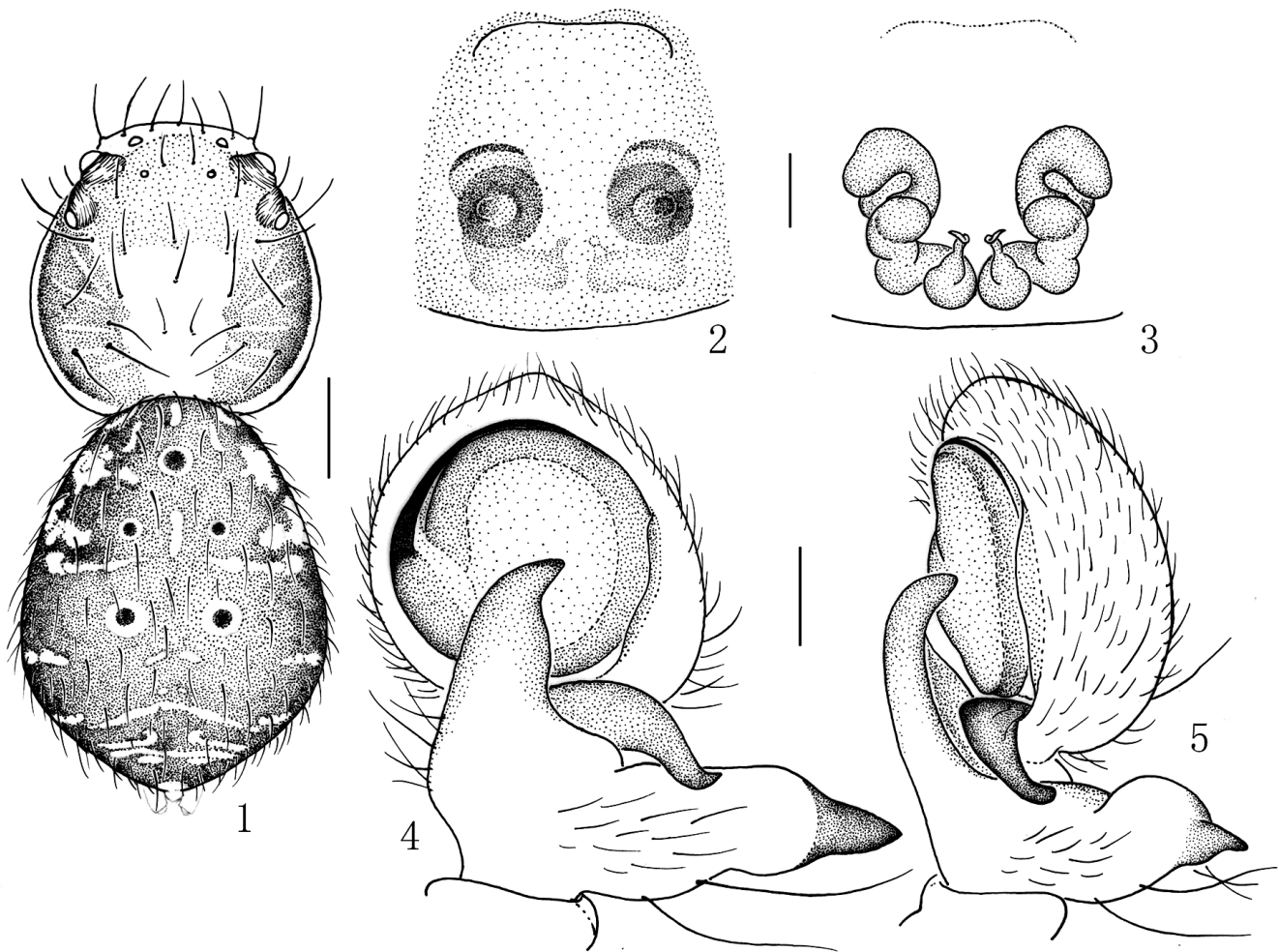
***Philodamia pingxiang*, new species**
(Figs. 1–5)

Type series. Holotype female (HU-GX0001), paratypes 5 males, 5 females (HU-GX0002), alt. 242 m, Mt. Daqing, Pingxiang City, Guangxi Province, China, 22°07'N, 106°44'E, May 14, 2006, Ming-Sheng Zhu, Jun-Xia Zhang, Wei-Guang Lian and Hui-Xin Ma leg.

Description. Female holotype, total length 3.38. Carapace 1.48 long, 1.55 wide; abdomen 2.13 long, 1.55 wide. Carapace wider than long, yellowish brown, sides blackish brown, with long setae. Eye sizes: AME 0.10, ALE 0.20, PME 0.05, PLE 0.16. Distances between eyes: AME-AME 0.35, AME-ALE 0.13, PME-PME 0.28, PME-PL 0.38. MOA: front width 0.50, back width 0.38, length 0.28. Clypeus height 0.13, much narrower than AME-AME. Chelicerae yellowish brown. Endites and labium dark. Labium longer than wider (0.33:0.28). Sternum yellowish white. Legs yellow to yellowish brown, femur I with half-baked, blackish annulation near distal end and remnant segments of legs with blackish brown spots. Legs with a few spines except for tarsi without spines. Femur I with two prolateral and two dorsal spines, femur II to IV each with two dorsal spines. Tarsal claw tufts poorly developed. Claw with comb-shaped teeth. Lengths of legs: I 4.49 (1.38 + 0.65 + 1.13 + 0.83 + 0.60), II 5.11 (1.58 + 0.70 + 1.25 + 0.93 + 0.65), III 3.93 (1.23 + 0.50 + 0.90 + 0.58 + 0.45), IV 3.53 (1.15 + 0.45 + 0.88 + 0.60 + 0.45). Abdomen ovate, longer than wide, dorsum blackish with yellowish white stripes, clothed with strong setae and weak hairs; venter yellowish. Variation of body length 3.38–4.14.

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Male (based on a paratype), total length 3.05. Carapace 1.28 long, 1.33 wide; abdomen 1.80 long, 1.35 wide. Eye sizes: AME 0.08, ALE 0.15, PME 0.04, PLE 0.13. Distances between eyes: AME-AME 0.28, AME-ALE 0.10, PME-PME 0.23, PME-PL 0.33. MOA: front width 0.45, back width 0.33, length 0.25. Clypeus height 0.13. Carapace reddish brown, with sides blackish. Legs I and II yellowish red, annulation of femur I and blackish brown



Figs. 1–5. *Philodamia pingxiang* Zhu et Ono, new species. 1, Female; 2, epigynum, ventral view; 3, same, dorsal view; 4, left palp of male, ventral view; 5, same, retrolateral view. (Scales: 1 = 0.5 mm, 2–5 = 0.1 mm.)

spots of remnant segments of legs all indistinct. Length of legs: I 4.20 (1.25+0.60+1.00+0.75+0.60), II 4.89 (1.50+0.68+1.23+0.88+0.60), III 2.77 (0.88+0.40+0.68+0.45+0.38), IV 2.64 (0.83+0.35+0.63+0.45+0.38). Abdominal dorsum blackish to dark yellow with yellowish white stripes. Variation of body length: 2.61–3.05.

Etymology. The specific name refers to the type locality.

Distribution. China (Guangxi).

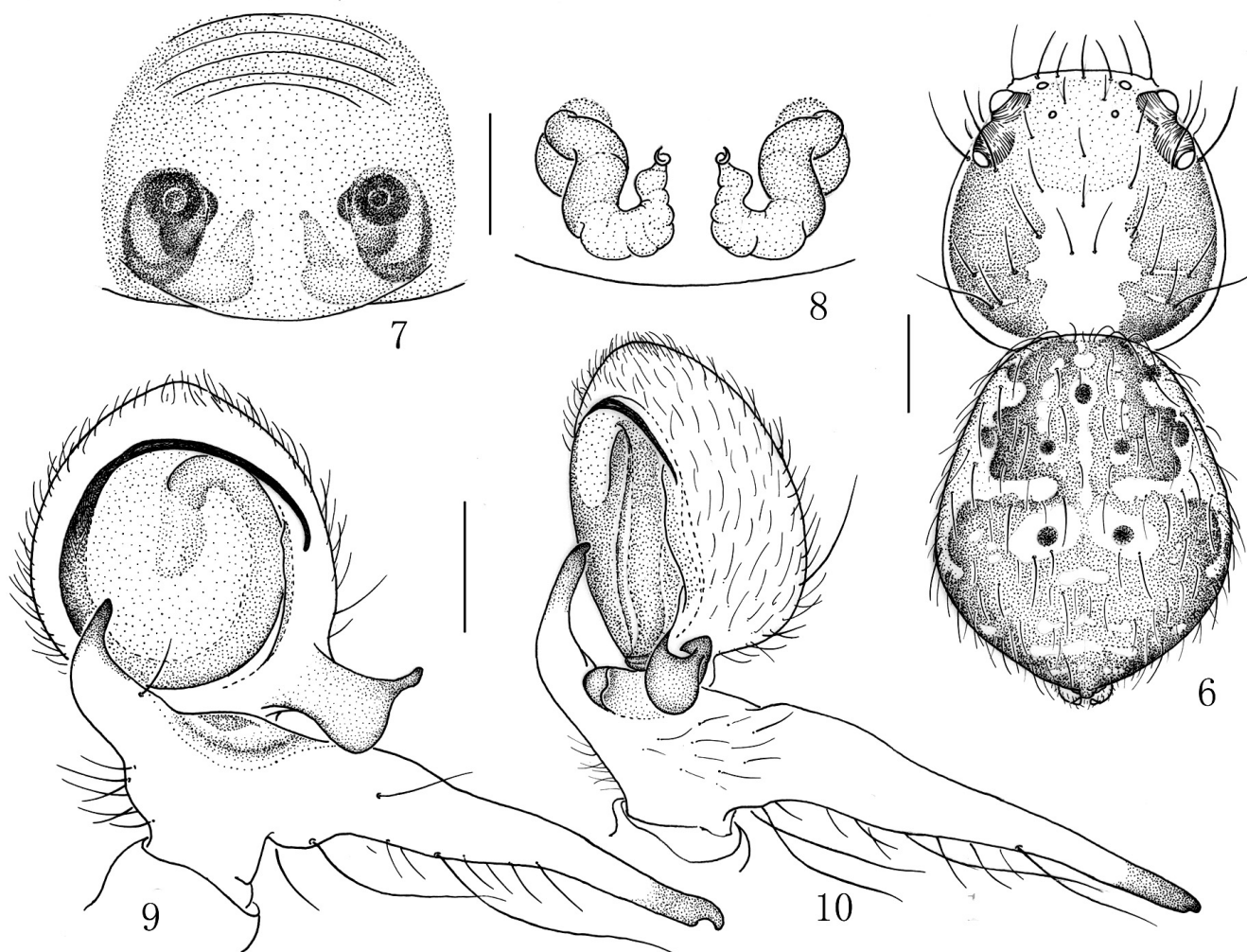
Remarks. Females of the present new species resembles *Philodamia armillata* Thorell, 1894 distributed in Myanmar and Bhutan. However, the copulatory opening of the latter is very wide and easily distinguishable from that of the new species.

***Philodamia tongmian*, new species**
(Figs. 6–10)

Type series. Holotype female (HU-GX0006), paratypes 1 male, 1 female (HU-GX0007), alt. 523 m, Tongmian Town, Ninming County, Guangxi Province, China, 21°48'

N, 107°18'E, May 18, 2006, Ming-Sheng Zhu, Jun-Xia Zhang, Wei-Guang Lian and Hui-Xin Ma leg.

Description. Female holotype, total length 3.15. Carapace 1.38 long, 1.43 wide; abdomen 1.85 long, 1.48 wide. Carapace wider than long, yellowish brown, sides blackish brown, with long setae sparsely and a few short hairs. Eye sizes: AME 0.08, ALE 0.18, PME 0.04, PLE 0.15. Distances between eyes: AME-AME 0.33, AME-ALE 0.10, PME-PME 0.26, PME-PLE 0.35. MOA: front width 0.45, back width 0.35, length 0.26. Clypeus height 0.13. Chelicerae pale orange. Endites and labium yellowish brown. Labium longer than wider (0.33:0.28). Sternum yellowish. Legs yellowish to reddish yellow, remnant segments of legs except for tarsi I to II and metatarsi all with half-baked, blackish annulation and blackish brown spots. Legs with a few spines except for tarsi without spines. Femur I with two prolateral and two dorsal spines, femur II to IV each with two dorsal spines. Tarsal claw tufts poorly developed. Claw with comb-shaped teeth. Length of legs: I 4.37 (1.33+0.63+1.03+0.78+0.60), II 4.79 (1.50+0.63



Figs. 6–10. *Philodamia tongmian* Zhu et Ono, new species. 6, Female; 7, epigynum, ventral view; 8, same, dorsal view; 9, left palp of male, ventral view; 10, same, retrolateral view. (Scales: 6=0.5 mm, 7–10=0.1 mm.)

+1.15+0.88+0.63), III 0.52 (1.13+0.53+0.83+0.58+0.45), IV 4.47 (1.13+0.48+0.83+0.58+0.45). Abdomen ovate, longer than wide, dorsum blackish to yellowish brown with yellowish white stripes, clothed with strong setae and weak hairs; venter yellow. Variation of body length: 3.15–3.55.

Male (based on a paratype), total length 2.38. Carapace 1.23 long, 1.23 wide; abdomen 1.25 long, 0.95 wide. Carapace reddish brown, both sides blackish brown. Eye sizes: AME 0.06, ALE 0.15, PME 0.03, PLE 0.13. Distances between eyes: AME-AME 0.28, AME-ALE 0.10, PME-PME 0.21, PME-PL 0.33. MOA: front width 0.38, back width 0.30, length 0.21. Clypeus height 0.12. Legs I and II yellowish red, annulation of femur I and blackish brown spots of remnant segments indistinct. Length of legs: I 4.06 (1.18+0.53+1.05+0.75+0.55), II 4.60 (1.35+0.60+1.18+0.87+0.60), III 3.14 (0.98+0.45+0.75+0.53+0.43), IV 2.93 (0.90+0.40+0.70+0.53+0.40). Abdominal dorsum blackish to dark yellow with yellowish white stripes.

Etymology. The specific name refers to the type locality.

Distribution. China (Guangxi).

Remarks. As in the former new species *Philodamia pingxiang*, females of *P. tongmian* is also distinguishable from the related species *P. armillata* which has wide copulatory openings. Although the present new species is very similar to *Philodamia pingxiang*, female genitalia of both the new species differ from each other in the inner structure, especially in the intromittent canals twisted in different directions (cf. Figs. 3 and 8). In addition to the female characteristics, male palpal organ is different between these two new species: RTA of *Philodamia pingxiang* is very thick with a large tooth on its top (Figs. 4–5), while

that of *P. tongmian* is very long and apically with a small hook (Figs. 9–10).

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